APPT 127: RESIDENTIAL PLUMBING CODE

Foothill College Course Outline of Record

Heading	Value
Units:	2.5
Hours:	18 lecture, 36 laboratory per quarter (54 total per quarter)
Prerequisite:	Per California Code of Regulations, this course is limited to students admitted to the Residential Plumbing Apprenticeship Program.
Advisory:	Current employment in the pipe trades industry.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	None
Grade Type:	Letter Grade (Request for Pass/No Pass)
Repeatability:	Not Repeatable

Student Learning Outcomes

- A student will be able to demonstrate knowledge of code requirements for clean-outs.
- A student will be able to define the term "fixture unit".
- A student will be able to define the term "shall" as it pertains to the UPC.

Description

A comprehensive overview of the Plumbing Code. Students will examine each chapter of the code book and practice proper application through worksheets, system design, and sizing exercises.

Course Objectives

The student will be able to:
A. Define terms used in the Uniform Plumbing Code.
B. Demonstrate ability to locate and apply applicable code sections.
C. Demonstrate ability to properly size residential drain/waste/vent, potable water and fuel gas systems.

Course Content

A. Define terms used in Uniform Plumbing Code
1. National, state and local standards and codes
2. Administration and definition of terms
3. Various types of plumbing system tests
4. Testing and inspection of plumbing systems
B. Demonstrate ability to locate and apply applicable code sections
1. UPC, Chapter 1, Administration
2. UPC, Chapter 2, Definitions
3. UPC, Chapter 3, General Regulations
4. UPC, Chapter 4, Plumbing Fixtures and Fixture Fittings, ADA requirements
5. UPC, Chapter 5, Water Heaters
6. UPC, Chapter 6, Water Supply and Distribution
7. UPC, Chapter 7, Sanitary Drainage
8. UPC, Chapter 8, Indirect Wastes
9. UPC, Chapter 9, Vents
10. UPC, Chapter 10, Traps and Interceptors
11. UPC, Chapter 11, Storm Drainage
12. UPC, Chapter 12, Fuel Piping
13. UPC, Chapter 13, Health Care Facilities
14. UPC, Chapter 14, Referenced Standards
15. UPC, Chapter 15, Firestop Protection
C. Demonstrate ability to properly size drain/waste and vent, potable water and fuel gas piping systems
1. Calculate sanitary drainage pipe sizing
2. Calculate sanitary vent pipe sizing
3. Methods and procedures for potable water pipe sizing
4. Methods and procedures for sizing fuel gas piping

Lab Content

A. Calculate fixture unit loads for a residential water system
B. System design exercises
C. Sizing exercises

Special Facilities and/or Equipment

None.

Method(s) of Evaluation

A. Results of written exercises, short quizzes, and end of session and end of module assessment
B. Class participation
C. Maintenance of a student's workbook with questions drawn from text

Method(s) of Instruction

A. Lecture
B. Lab Assignment
C. Group Discussion
D. Demonstration

Representative Text(s) and Other Materials

International Association of Plumbing and Mechanical Officials. Uniform Plumbing Code. Ontario, CA: International Association of Plumbing and Mechanical Officials, Inc., 2015.

International Association of Plumbing and Mechanical Officials. Uniform Plumbing Code Study Guide. Ontario, CA: International Association of Plumbing and Mechanical Officials, Inc., 2015.

NOTE: These are the standard Plumbing/Pipe Trades textbooks/ workbooks used for this course.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

A. Readings from assigned textbook, Uniform Plumbing Code, chapter 3

1. General Regulations, Section 301.0, Materials - Standards and Alternates

B. Writing assignments given in the laboratory

1. Make a schematic drawing of a basic natural gas piping system

2. Describe properties and indicate pipe size of each point in the system

Discipline(s)

Plumbing